

2 AUGUST 1955

~~TOP SECRET~~

SPECIAL
NATIONAL INTELLIGENCE ESTIMATE
NUMBER 11-10-55

SOVIET GROSS CAPABILITIES FOR ATTACKS
ON THE US AND KEY OVERSEAS
INSTALLATIONS AND FORCES
IN 1965

CIA HISTORICAL REVIEW PROGRAM
RELEASE IN FULL

Submitted by

DIRECTOR OF CENTRAL INTELLIGENCE

The following intelligence organizations participated in the preparation of this estimate: The Central Intelligence Agency and the intelligence organizations of the Department of State, the Army, the Navy, the Air Force, the Atomic Energy Commission, and the Defense Intelligence Agency.

Concurred in by the

INTELLIGENCE ADVISORY COMMITTEE

on August 1955. Concerning the intelligence agencies, the Department of State, the Department of the Army, the Department of the Navy, the Department of the Air Force, the Department of the Atomic Energy Commission, and the Defense Intelligence Agency. The Joint Staff, the Joint Chiefs of Staff, and the Joint Military Intelligence Committee. The estimate is being submitted to the President for his information and guidance.

SERIES _____
COPY _____ OF _____

~~TOP SECRET~~

ACCOUNTABLE DOCUMENT
RETURN TO: G-2, HISTORY,
Room 7E47, Map.

COPY NO. 103
ASSISTANT DIRECTOR, ONE

CENTRAL INTELLIGENCE AGENCY

DISSEMINATION NOTICE

1. This estimate was disseminated by the Central Intelligence Agency. This copy is for the information and use of the recipient indicated on the front cover and of persons under his jurisdiction on a need to know basis. Additional essential dissemination may be authorized by the following officials within their respective departments:

- a. Special Assistant to the Secretary for Intelligence, for the Department of State
- b. Assistant Chief of Staff, G-2, for the Department of the Army
- c. Director of Naval Intelligence, for the Department of the Navy
- d. Director of Intelligence, USAF, for the Department of the Air Force
- e. Deputy Director for Intelligence, Joint Staff, for the Joint Staff
- f. Director of Intelligence, AEC, for the Atomic Energy Commission
- g. Assistant to the Director, FBI, for the Federal Bureau of Investigation
- h. Assistant Director for Collection and Dissemination, CIA, for any other Department or Agency

2. This copy may be retained, or destroyed by burning in accordance with applicable security regulations, or returned to the Central Intelligence Agency by arrangement with the Office of Collection and Dissemination, CIA.

3. When an estimate is disseminated overseas, the overseas recipients may retain it for a period not in excess of one year. At the end of this period, the estimate should either be destroyed, returned to the forwarding agency, or permission should be requested of the forwarding agency to retain it in accordance with IAC-D-69/2, 22 June 1953.

~~WARNING~~

~~This material contains information affecting the National Defense of the United States within the meaning of the espionage laws, Title 18, USC, Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.~~

DISTRIBUTION:

White House
National Security Council
Department of State
Department of Defense
Operations Coordinating Board
Atomic Energy Commission
Federal Bureau of Investigation

SOVIET GROSS CAPABILITIES FOR ATTACKS ON THE US AND KEY OVERSEAS INSTALLATIONS AND FORCES IN 1965

THE PROBLEM

To estimate Soviet gross capabilities for attacks on the US and key overseas installations and forces in 1965, without taking into account the effectiveness of allied defenses and countermeasures.

INTRODUCTORY NOTE

Soviet plans for attack on the US and key US overseas installations and forces would be made in connection with an over-all strategy for general war. Accordingly, some Soviet forces and materiel, including mass destruction and latest delivery weapons, would almost certainly be earmarked for use against US allies and for reserve. This estimate does not consider the problem of such allocation nor of over-all Soviet strategy, but confines itself essentially to the *gross capabilities* for attack on the US and key US overseas installations and forces as indicated by the estimated state of USSR weapons, equipment, and facilities in 1965.

In arriving at such an estimate for 1965 it has been necessary to rely essentially upon our current knowledge of the Soviet military establishment and its shorter-range developmental programs, and to extrapolate this knowledge — guided by estimates of military requirements and a general awareness of future US military development — into the future. It has been assumed that the USSR: (a) will continue to make a large and probably increasing annual economic outlay for military purposes; (b) will continue to improve its military capabilities, including its ability to conduct offensive operations; and (c) will not achieve a technological breakthrough in the sense of producing weapons systems other than those now foreseen or of greatly reducing the time required for development of anticipated weapons.

The following judgments with respect to the capabilities of the Soviet military forces in 1965 are thus highly speculative. This is particularly true since in a period as long as ten years the above assumptions may be seriously undermined by political, economic, and technical developments, the nature and significance of which cannot be gauged at this time. For example, whereas we believe it unlikely that the USSR will achieve a decisive breakthrough on the technological level, such technological advance — beyond Western development or anticipation — is certainly within reason and cannot be entirely excluded.

CONCLUSIONS

1. In attacking the US and key US overseas installations the major Soviet objectives in 1965 will probably be: (a) to destroy or neutralize as quickly as possible US continental and overseas capabilities for nuclear retaliation; (b) to deliver attacks on urban, industrial, political, and psychological targets in the US which would prevent, or at least hinder, the mobilization of US war potential; and (c) to inflict such destruction on US overseas installations as would hamper or prevent the US from reinforcing or resupplying its forces.
2. The Soviet leaders would probably calculate that in order to achieve these objectives initial attacks would have to be accomplished with the maximum degree of surprise consistent with the required scale of attack, and, therefore, would place chief reliance on nuclear attacks by bomber aircraft and guided missiles. They could also employ biological and chemical weapons in overt attacks. The USSR will also be capable of clandestinely introducing nuclear, BW, and CW weapons, and employing them against highly critical targets. (Paras. 21, 25)
3. We estimate that Soviet capability to produce fissionable materials will almost certainly be more than sufficient to provide for the requirements of attack on the US and key overseas installations and forces in 1965. All sizes of nuclear weapons, including those of the largest yield, will be deliverable by the aircraft estimated to be then in use. Nuclear warheads could be available for the surface-to-surface and the air-to-surface guided missiles which could be used for offensive action against the US. (Para. 7)
4. We estimate that it would be within Soviet *production capacity* to have a large inventory of surface-to-surface guided missiles of all ranges in stockpile by 1965, including sufficient quantities of the two-stage ballistic missile (1,900 nm) and the ICBM to constitute a major and unprecedented threat to the US and key overseas installations and forces.¹ ICBM attacks against the continental US could be launched from sites in the vicinity of widely dispersed assembly plants located in the interior of the USSR. Although there is no basis for estimating the number of such launching sites which might be available in 1965, we believe ICBMs could be launched in an initial attack against many US targets. The entire Soviet heavy bomber force also could be launched from interior bases and, with inflight refueling where necessary, reach any target in the US on two-way missions. There would probably be a reduction in the numbers of Soviet bomber aircraft, however, if reliable and accurate guided missiles became available in sufficient quantities. Guided missiles with nuclear warheads could be launched from submarines and conceivably also from surface vessels against targets several hundred miles inland. (Paras. 13, 22-24)
5. Attacks on US overseas installations and forces could be carried out simul-

¹ The D/I USAF believes that because of the estimates contained in NIE 11-6-54 as to the dates of operational availability of both a two-stage medium-range ballistic missile and an ICBM, there will be ample time by 1965 for Soviet production capacity to produce several thousand of the two-stage missiles but not enough time to produce more than several hundred ICBMs. There appear to be no factors which necessarily limit this production capacity except time.

taneously with intercontinental attacks. The aircraft available could consist of the heavy bombers not committed against the US, and the medium and light bomber forces. Virtually all of the targets in these areas could also be reached by medium or short-range guided missiles launched from within the USSR or Soviet-dominated territory. Sizeable Soviet ground and tactical air forces, airborne forces, and surface fleets will also be available for such attacks and a large number of Soviet submarines would probably be employed against naval striking forces.

These Soviet forces could use nuclear weapons. (*Paras. 26-28*)

6. It is clear that by 1965, even assuming no technological breakthrough, the development of Soviet weapons will greatly enhance the USSR's gross capability to attack the US and US overseas forces and installations. Perhaps even more important, the USSR's capability to attack with surprise will probably increase. It is important to note, however, that we are estimating the USSR's *gross* capability, and have not taken into account the present or future effectiveness of allied defenses, countermeasures, or intelligence.

DISCUSSION

I. AVAILABILITY OF SOVIET MASS DESTRUCTION WEAPONS

Nuclear Weapons^{*}

7. There is no evidence on the USSR's specific plans for developing its atomic energy program during 1958-1965, nor are there any specific parameters to which the growth of the program during this period can be tied. Direction of the program and actual allocations of fissionable material to weapons and other uses will depend on Soviet planning decisions. We estimate that Soviet capability to produce fissionable materials will almost certainly be more than sufficient to provide for the requirements of attack on the US and key overseas installations and forces in 1965. The principal problems in connection with use of nuclear weapons will be those of adaptation to various delivery systems. By 1965 all sizes of nuclear weapons, including those of the largest yield, will be deliverable by the aircraft estimated to be then in use. Nuclear warheads could be available for the surface-to-surface and the

air-to-surface guided missiles which could be used for offensive action against the US.

Biological Weapons

8. By 1965 the USSR will probably have an improved capability to produce antipersonnel, anticrop, and antilivestock BW weapons systems for use against the US. Since it is not possible to stockpile large quantities of most BW agents in prolonged storage, most operational requirements would still have to be supplied directly from production facilities. BW agents would probably be disseminated by means known at present, including aerosol generators, insect vectors, bombs, and spore impregnated material. The choice of means would depend primarily upon the type of target and whether overt or covert dissemination is used.

9. The Soviets will be capable of employing antipersonnel BW agents singly, in combinations, or concurrently with CW agents. The BW agents which the Soviets can develop and are most likely to have for antipersonnel use by 1965 are the bacterial agents causing anthrax, brucellosis, glanders, and tularemia; the stable viral and rickettsial agents causing

^{*} See NIE 11-2-55, Restricted Data, "The Soviet Atomic Energy Program," dated 26 April 1955.

Q-fever, psittacosis and various forms of encephalitis; the toxins causing botulism and enteric disorders; and fungal toxins. Until antipersonnel BW weapons are used on a mass basis there will be only partial data from which to judge the efficacy of such weapons. Variations of the numerous physical factors (effectiveness of delivery, climatic conditions, immunological resistance, etc.) upon which the efficacy of BW attack depends would cause its effectiveness against the personnel attacked to range from virtually zero to nearly 100 percent.

Chemical Weapons

10. The USSR has available chemical warfare weapons of World War II which are adequate for the dissemination of standard CW agents and are potentially adaptable to other agents. We estimate that the Soviets have the facilities and scientific knowledge to produce two nerve gases (GA and GB). Therefore, if chemical warfare were utilized, the USSR would almost certainly be able to employ these as well as the standard CW agents. Soviet research in the biochemical sciences may also result in the development of toxic compounds of military significance, such as substances which would incapacitate people without killing them or cause temporary mental disorders. Such agents may be sufficiently developed for military use in 1965.

Radiological Weapons

11. The USSR will possess nuclear weapons capable of producing wide radioactive fall-out, and which it could use primarily for this purpose. Other than this, we believe it unlikely that the USSR will be able to develop radiological warfare weapons by 1965 that will possess offensive military significance.

II. MEANS OF WEAPONS DELIVERY

Guided Missiles

12. A guided missile program which would probably meet Soviet missile requirements and be within Soviet scientific capability by 1965 could include the following:

a. a two-stage ballistic missile with a maximum range of about 1,900 nautical miles with

inertial guidance and a CEP of 3 to 4 nautical miles;

b. an intercontinental ballistic missile with a maximum range of 5,500 nautical miles and a CEP possibly less than the five miles presently estimated for the period 1960-1963;

c. a submarine-launched supersonic missile which would have a range up to 1,000 nautical miles; and

d. an air-to-surface missile with a range of approximately 100 nautical miles.

13. We believe that the USSR will probably concentrate effort on the ballistic missile because of its relative immunity to countermeasures and its greater capability for surprise. The number of missiles which might be available cannot be estimated with confidence. It would depend on many factors now impossible to determine, including the Soviet estimate of requirements and allocation of resources for these weapons. However, assuming successful development and adequate priority we estimate that it would be within Soviet *production capacity* to have a large inventory of surface-to-surface guided missiles of all ranges in stockpile by 1965, including sufficient quantities of the two-stage ballistic missile (1,900 nm) and the ICBM to constitute a major and unprecedented threat to the US and its key overseas installations and forces.³

14. By 1965, the USSR may be able to develop an unmanned satellite vehicle. At that date, it would have psychological and research significance, and possibly military surveillance significance.

Aircraft

15. There would probably be a reduction in the numbers of Soviet bomber aircraft if reliable and accurate guided missiles became available

³ The D/I USAF believes that because of the estimates contained in NIE 11-6-54 as to the dates of operational availability of both a two-stage medium-range ballistic missile and an ICBM, there will be ample time by 1965 for Soviet production capacity to produce several thousand of the two-stage missiles but not enough time to produce more than several hundred ICBMs. There appear to be no factors which necessarily limit this production capacity except time.

in sufficient quantities. However, if such missiles do not become available in sufficient quantity, the Soviet long-range bomber force will probably be maintained at about 1,400 aircraft, composed of roughly equal numbers of medium and heavy bombers. Versions of existing heavy bombers, the BISON and BEAR, and the medium bomber, the BADGER, with slightly improved performance characteristics will probably still be operational in 1965. We believe that a medium-range jet bomber with supersonic dash capabilities, and possibly a long-range jet bomber with supersonic dash capabilities, will also be available in 1965. It is also possible that the USSR could have a few nuclear-powered heavy bombers which would have, for all practical purposes, unlimited range, but only subsonic speed. In addition, the USSR will probably have a light bomber force of about 3,000 aircraft, consisting of aircraft with performance superior to that of the current BEAGLE and including some light bombers with a high subsonic cruise and supersonic dash capability.

16. In 1965 Soviet bombers will be able to reach all parts of the US on two-way missions, employing inflight refueling where necessary or desirable. We also estimate that the USSR will develop increasingly advanced ECM techniques by 1965, possibly including techniques capable of seriously degrading the performance of conventional early warning and gun-laying radars. Moreover, Soviet bombers available in 1965 will probably utilize bomb-aiming equipment giving an accuracy of 750-1,500 feet CEP visually and 1,200-3,000 feet CEP by radar.

Naval Forces

17. Soviet surface vessels could employ nuclear weapons such as mines and torpedoes, and could be modified for launching guided missiles with nuclear warheads. The performance characteristics of Soviet surface ships are comparable to those of Western navies. By 1965 nuclear powered vessels are a possibility, and could include aircraft carriers and guided missile ships. However, we think it unlikely that by 1965 the Soviet sur-

face fleet will present a serious threat to the continental US.

18. The naval vessel most likely to be selected by the USSR for attack on the US or its bases and forces is the submarine. We estimate that in 1965 the USSR will have a submarine fleet of some 400 to 600 craft. A very large proportion will be modern long-range boats, snorkel equipped; a limited number could be nuclear propelled. A number of long-range submarines could be designed for or converted to guided missile work, and as such could carry up to six turbojet-powered guided missiles. Conventional submarines could carry 25 to 50 mines or 15 to 24 torpedoes, or combinations of the two.

19. The long-range submarines will have an operating radius under combat conditions of 3,700 nautical miles (W type) or 5,400 nautical miles (Z type). Submarines equipped with auxiliary propulsion for high underwater speeds, i.e., about 25 knots, will have a shorter range, and will be sharply limited in the length of time they can operate at such speeds. Nuclear-powered submarines will probably attain submerged speeds approaching 30 knots, and will probably have a submerged endurance limited only by personnel capabilities.

Ground Forces

20. During this period the Soviet Army will probably continue to modernize its ground force systems, and by 1965 will probably have considerable numbers of improved weapons including tanks, self-propelled guns, surface-to-surface guided missiles and artillery projectiles with nuclear warheads, and an anti-tank guided missile. These new weapons, together with improved support and related materiel, including equipment for airborne forces, will probably greatly increase Soviet Army capabilities to conduct highly mobile operations under conditions of either nuclear or conventional warfare.

III. PROBABLE GROSS SOVIET CAPABILITIES FOR ATTACK IN 1965

21. Soviet capability to attack the US and overseas forces in 1965 will derive primarily from its ability to deliver nuclear weapons by

bomber aircraft or guided missiles. The manner in which the USSR would combine or coordinate guided missiles and bomber aircraft in carrying out attacks in this period cannot be estimated with either confidence or precision. The USSR would probably use both aircraft and missiles in such attacks—missiles because of their relative invulnerability to air defenses and aircraft because of their greater accuracy of weapons delivery. Aircraft would also be required for reconnaissance.

Attacks Against the Continental US

22. Because of the range of the ICBM estimated to be available in 1965, these missiles could be launched from sites in the vicinity of widely dispersed assembly plants located in the interior of the USSR. This would greatly simplify logistic problems while providing for an optimum degree of security. Although there is no basis for estimating the number of such launching sites which might be available in 1965, we believe that ICBMs could be launched in an initial attack against many US targets.

23. Intercontinental attacks by aircraft in 1965 will probably be conducted by heavy bombers only. A sizeable force of up to 700 heavy bomber aircraft could be launched from interior bases and, with inflight refueling where necessary, reach any target in the US on two-way missions. Air-to-surface missiles with nuclear warheads will probably greatly increase the capability of these aircraft for attacking heavily defended targets.

24. Guided missiles with nuclear warheads could be launched from submarines against targets several hundred miles inland; conceivably this could also be done from surface vessels. Torpedoes could be used to deliver a nuclear attack on some major seaports and naval bases. Such torpedoes might be modi-

fied to sink after a predetermined length of run and explode after a time delay.

25. The USSR will also be capable of clandestinely employing nuclear, BW, and CW weapons against the US. The scale of attack by such methods would be small as compared with the primary delivery methods discussed above. However, this capability could be employed against highly critical targets.

Attacks on US Forces and Installations Overseas

26. Attacks on targets in the European, African, and Asiatic areas could be carried out simultaneously with intercontinental attacks. The number of aircraft available could consist of the heavy bombers not committed against the US, and the medium and light bomber forces. Virtually all of the targets in these areas could also be reached by medium or short-range guided missiles launched from within the USSR or Soviet-dominated territory.

27. Many key US installations and forces overseas will continue to be vulnerable to attack by Soviet ground and tactical air forces. By 1965 the combined Soviet airborne and mechanized forces could also present a serious threat to certain overseas installations which might not be vulnerable to other forms of ground or air attack, or which the USSR might want to seize intact.

28. Soviet naval forces—aircraft, surface vessels, and submarines—could be used to support the primary air and ground campaigns in overseas areas and would undertake a major effort to interdict sea communications. A large number of Soviet submarines would probably be employed in a combined reconnaissance and attack role against naval striking forces.

~~TOP SECRET~~

~~TOP SECRET~~